CORNERSTONES OF TRACK AND FIELD '61

Our Desire, Motivation and Morale

It would seem that these cornerstones add up to mental readiness in track. As yet our physiologists and biologists have been unable to determine the physical limits for a human individual under given conditions. However, we are much closer to knowing these limits than we are the mental limits. Actually there is a great amount of evidence to suggest that most of our barriers are not physical at all but psychological. We have all seen many examples where the blame for missing success was placed upon the physical aspect, yet in the last analysis it was actually psychological in nature.

It is my feeling that one can hardly separate desire, motivation, and morale when seeking athletic success. It might be added that these very same things are what we find involved for our students as well as the athletes. In fact, all of us can pretty generally agree that these are the ingredients for success in almost everything.

Since it is impossible to separate desire, motivation and morale, let's try to tie down a few points that are involved. Confidence in the leader or coach keeps the athlete's morale up and also stimulates motivation to try to achieve the goals, either his own or those set for him by his coach. The "belonging" or being a part of the group is another point for consideration. All too often there is the mistaken impression that track is purely "individual." It is our job to see that the athlete competes not only against but for. The man who is driving toward the tape for himself alone is more apt to quit than the man who is doing so for his team. For, corny as it may sound, the "Alma Mater." This is real in the sense of affecting the individual, and he who is driven by loyalty will probably be able to reach deeper into his physical reserves than the individual who lacks it.

As coaches we must help our athletes set concrete and realizable goals. Goals alone are not enough—our athlete must see signs of progress along the way and the goals must be achievable. It is important that an athlete can see that accomplishment is possible and real.

The things just mentioned have been quite pointed. Now perhaps it would be wise to generalize a bit about all of them. As a leader or coach we must be ever aware that from time to timethere will be need for readjustments, so as to give a realistic appraisal of what we offer, so that we do not lose the confidence of our athlete, so that he does not become cynical, and above all to help him accept the fact that we have much to offer and yet do not have to be perfect in the process of doing it. Unless we are able to do this it is very likely that we will lose the athlete's attention; then we will wonder why he has drifted away from us when we are trying so hard to guide and help.

Another pertinent factor connected with the ultimate results our athlete might enjoy has to do with the young man's relationship with other male persons prior to coming under our tutelage. Usually his father, grandfather or uncle would be among the most important male figures in his life. It is easy to see that it would not be unusual for a young boy to generalize from early learning and dealings with men such as these. Usually if early relationships with these important male persons were good ones, then you and I, the coach, have few real problems. But on the other hand if we have on our team youngsters whose relationship with their fathers or other male figures in their early development was unsatisfactory it seems to be our luck to fall heir to all of the tension and hostility and anxiety that was felt at the early stages of the

relationship between the young man and those adult males. We have all experienced the uncomfortable result of such situations. If it was a satisfactory beginning, then the carryover makes the relationship between athlete and coach much more pleasant and productive. However, if the early relationship was a poor one and the coach or leader has for some reason been set up as infallible, we are then placed in the untenable position of being an "ideal"--a man who is looked up to by the young boy as the perfect man who should have been in his life to help him grow up.

Being human, and we all are, we make mistakes from time to time and turn out not to be perfect. Now comes the explosion! As the athlete begins to see us as fallible, he turns on us and places us in the same category as the unsatisfactory males in his early life. This is a problem that can be most frustrating to a conscientious and sincere coach. It is difficult to cope with their hostilities and tensions and anxieties, yet still try to be constructive and inspirational in bringing about their best potential development.

Frankly, I don't think there is any one answer in the handling of this kind of situation. The way you will go about working out this problem, if it evolves, depends a great deal upon your own personality, upon the framework upon which you operate, the facilities that are available and of course upon the personality of the individual athlete. Regardless of how you approach a solution, I think the important thing for all of us to be able to do is to understand within ourselves what is going on; then we can base our decision on a realistic appraisal of this situation and will not be groping in the dark.

The feeling of belonging, the worthwhileness of sharing and subjugating oneself for the total team is something that cannot be overrated in our coaching approaches in track and field. Unlike the football, basketball or baseball teams, that come marching onto the field as a body, playing together as a unit in the competition, and when the competition is over, marching off the field together, members of track and field teams make their appearances by twos and threes, participate in their events, and then retire while other men take their places. With the exception of relay races, every event would appear to be strictly an individual affair rather than a team affair. It is comparatively easy to develop and foster an esprit de corps in teams playing under such conditions as those found in football, baseball and basketball, for in these sports the unifying centripetal forces are actively in evidence to help the coach. In track, the separating centrifugal forces are constantly operating to impede him in this purpose.

However, it is doubtful that one can find a higher type of team spirit than is found in track. This spirit, when properly developed and experienced, can become one of the most valuable assets an athlete can carry with him into all the later experiences of his life. Frankly, we are missing a bet when we don't think of track and field as a team sport just as we would football, baseball and basketball. There is no place for selfishness on a team; there should be a mutual interest in one another and the performances of one's teammates.

The responsibility for creating such an atmosphere must rest upon the personality of the coach, upon the captain, and upon the upperclassmen or born leaders among your track athletes. Thus it is important that we urge unselfishness and loyalty to those around us. In your brief talks individually and collectively you can plant the seed regarding the importance of spirit if true success is to be realized. Generally the individual approach is better than the en masse, for as you coach you can catch warning signals of a boy's getting too self-conscious, whether from self-conceit or self-depreciation. Then is the time to draw this boy aside for a little talk

A word here and there at the proper moment will create a beautiful team attitude which could well become the most valuable asset your track boys will carry away from the years of training and sacrifice they gave to the team or teams upon which they competed.

It is important that we create an atmosphere that breeds confidence into the individual and helps him have a wholesome and proud awareness of himself as a being. Throughout our lives we are constantly reminded of what we are by other people. If something is repeated often enough, we soon begin to believe what is said, and soon this is the kind of person we try to become. Certainly we can all realize, then, that it is very important to praise realistically and honestly so as to develop a real confidence and pride for the boy in himself.

As we function in the role of confidence "builder-upper" we as coaches must at the same time recognize the great importance of setting concrete and realizable goals for our boys if they are to have faith in our opinions about them and about their potential.

We must approach this setting of goals of a concrete and realizable nature carefully, with the full realization of the effect it will have upon the athlete. Above all, we should recognize that if an individual has a basic feeling of inadequacy and inferiority, this will change only gradually regardless of our urgings or goals. Too, it would be important that in such personalities our efforts be aimed toward setting up goals which can be achieved rather quickly, lest the athlete become disillusioned and give up the challenge. Only in this way can we improve motivation and morale. We are all fully aware that an individual or group with a goal that can clearly be seen is more apt to achieve that goal than one whose goal is vague or intangible. As indicated earlier, goals alone are not the answer--there must be some evidence of progress toward the goal. Probably of the greatest importance is that the athlete must believe it is possible for the goal to be reached.

In all this goal-setting, we coaches must realize that there is the matter of a plateau. This is particularly noticeable in physical performance. For a long period of time there will be no evidence of improvement and then suddenly improvement takes place. Thus it would certainly behoove us as coaches to make our athlete aware of this phenomenon, so that he will realize that his failure to progress is to be expected and that he should not dwell upon it as poor effort on his part. In other words, let's make it seem absolutely normal in the scheme of athletics.

Goals, like fabric, are interwoven with many other factors. Some are out in the open and apparent and intrinsic goals, while others may be completely outside the actual activity itself. Just as unreachable goals set by the coach can cause tying-up and emotional upheaval, so can pressures from the outside, parental urgings, girl friends, love, security and a million other things. These pose additional headaches for the coach and athlete relationship. Oftentimes these outside influences which cause a boy to compete for something that is beyond us can become a source of serious turmoil, if not sensibly discussed and corrected.

In all of this there is possibly one point of greater importance than all others if we are to maintain desire, morale, and motivation. That would lie in the line of communication between all parties involved, the coach, the athlete, the parents and any others that are closely associated with the activity. This is fundamental in coaching and, I believe we all agree, in all other lines of human relationship.

MENTAL READINESS ON THE CINDER PATH

Why does that big shot-putter who can throw fifty feet in practice fail to put forty-five feet in the big meet? Are your ulcers aggravated by a runner who is physically ready but mentally whipped before he even attempts to race a rival whom he respects too much? If this has happened to you, you're no different from all your fellow track coaches. No doubt we are all convinced that one of the biggest coaching problems of track and field is that of trying to make some boys believe they can do what we know they can do. But before you decide it's hopeless, relax. Don't think for a moment that cases like those mentioned above are found only on high school, junior college or college levels. Some of the world's greatest athletes have lost events due to mental blocks.

For a fine example we need only look back to the year 1954 when Roger Bannister broke the 4-minute-mile barrier. Until that time no man in the world could make himself believe it could be done. It was only a short few weeks after the mental block had been removed that Australian John Landy, running in Finland, once again broke the 4-minute-mile barrier.

Most of us aren't blessed with Bannisters, Landys, O'Briens, Gutowskis, Braggs, Longs, Cunliffes, Grelles, or Burlesons, but we do have boys who are faced with much the same problem. They don't need to believe they can break 4 minutes in a mile, or beat 60 feet in a shot put, or pole vault 16 feet, run the half-mile in 1:45, or the mile in 3:53; however, they may need to believe that they can break 5 minutes, or do 5'6" in the high jump, or even take three steps between the high hurdles, or run the 100 in ten seconds. Actually, I think it is generally agreed by all of us at the California Workshop that there is no greater satisfaction in coaching than the elation that a coach feels in bringing an athlete past a mental block.

It isn't necessary to ask the question, "Can it be done?" for it has been done over and over again and will be done over and over again in the future. If not, we wouldn't have the sub-four-minute mile or the 60-plus shot put, or the 26-foot-plus broad jump and a host of other great records that have been set by men who have been able to develop a mental readiness and break through the mental block.

Each of us can establish firmly in our mind the truth that no one knows the limit of what man can accomplish in coaching and athletic activity. This means specifically that no one can possibly foretell the limit of what each one of us can accomplish in coaching. However, if you set a limit on what you can accomplish, you will never surpass yourself within those limits. This is true with our athletes; certainly if we have self-imposed limits we will never realize our potentials as coaches or athletes. Therefore the extent of success depends on sustained ambition, sincerity of purpose, ceaseless striving, practical knowledge, faith in our ability to meet successfully each challenge that confronts us. No coach or athlete worth his salt can set any limit on what can be achieved!!

PSYCHOLOGY OF PRACTICE

In order to make each practice session give in return some worthwhile dividends for the time and energy expended, the coach must not leave the development of athletic skills to chance. Practice sessions must be organized in a manner that will utilize all the up-to-date information on coaching, and thus produce a higher degree of athletic skill in a shorter space of time. It is sound coaching to try to duplicate physiological, organic and psychological disturbances during the practice sessions that your athlete will experience in his competitive activity.

We must place before the athlete every incentive we know to create attention, the desire to learn, willingness to practice faithfully and the maximum of interest. Incentives must be worthy in order to be effective by sustaining top level effort and attention during practice. In the past many potential champions have failed to achieve success because of the lack of a worthy incentive and an unwillingness to make the necessary effort.

Fortunately the coach can take into consideration the fundamental needs of every individual personality. We all recognize that physical well-being is the foundation from which we must start. Then there is the need for personal recognition, a feeling of worth and importance, and lastly, of course, the need for security and affection.

Some of the most effective incentives may be listed as follows:

Personality of the coach: The athlete must have a regard, an admiration and affection for his coach. At the same time, it is important that the youngster realize that his coach is fallible, that he too makes mistakes and is not perfect. On the other hand, the coach must pay a great deal of attention to his own personal development.

A positive approach: The athlete must be sold on the necessity of doing certain fundamental things in order to attain his goal. Remember, coaching is not criticism, but inspiration, explanation, and exhortation. While a coach must not be a back-slapper, he should give encouragement at all times. The athlete also has responsibility in the matter of understanding and appreciating the coach and his problems. He must avoid being over-sensitive and allowing himself to have resentment, because certainly such destructive attitudes will give him the wrong path for success. We must help the athlete to view the coach as a channel through which the knowledge of the correct manner in which to develop his potential ability must come. When both the coach and the athlete have the correct mental attitude, the scope of the combined effort becomes greater and greater--THE MORE THE ATHLETE HELPS THE COACH BY PROPER ATTITUDE, THE MORE HELP THE COACH CAN GIVE THE ATHLETE.

Tell why, how and when: This reverts again to that all-important facet of communication between the coach and the athlete. The athlete who knows precisely why he is practicing, when and how it is going to help, and the manner in which it is going to help will practice with greater attention and interest. By explaining the objectives, values and use, the coach will create interest and attention that otherwise would be missing.

Create specific objectives: Without wanting to be repetitious, I think this is extremely important and delves into the area of goals once again. Care must be taken to make sure that objectives are possible of attainment. The coach must be

careful not to teach too much at one time and thus spoil one of the greatest incentives--a definite goal to be reached. It is best to reward the athlete for his own progress, rather than in competition against other members of the team, although it is necessary at times to pit one against another. The coach should look at all times for things to recognize and applaud in his athlete. The athlete also will help the team spirit by recognizing good efforts by his fellow team members, and coaches should encourage this attitude in their athletes.

Use the play factor: One of the most vital fundamental laws of the human being is the desire to play, to have fun. By utilizing this law the coach will obtain more work from his athletes and will avoid staleness and inertia that follow unimaginative practice.

Organization, environment and equipment: All of these have definite effect on the work and interest expected of the athlete. Incentives are often lost if these factors are neglected. Therefore, dress up the practice; make things neat; keep the locker room clean and tidy and the practice field in order. Even the dress of the coach will influence the practice. Further, the neatness and cleanliness of the uniform worn by the athlete will influence the way he performs in practice and also the attitude he holds toward what he is doing.

Create tradition in your team: Make the athletes proud of the way they practice. Have visual aids, such as a bulletin board, signs, charts, records, pictures; these will engender team pride and inspire the athlete to do everything possible to develop his potential ability.

These are only a few of the ways that can help an athlete learn athletic skills and develop his potential ability to the highest degree of efficiency. The coach who explores these avenues of incentives cannot help but have greater success. Again, by well-organized, purposeful practice we are able to duplicate the physiological, organic and psychological disturbances that will be encountered in competition.

NOW THE COMPETITION

The coach can play a vital and important part in removing the mental blocks and setting the stage for impressive competitive effort which will give the athlete the opportunity to perform to his best potential.

One only needs to look at the great improvements, as our records go lower and lower on the track and higher in the air to realize that mental readiness is going to be a more important factor in track and field than ever before.

Let's help our shot putter, for instance, to realize his best performance in the competition--teach him to take the proper warm-up and to find where his best puts come. We might go back into the practice sessions and have him count the throws each day of the week, so as to reach a firm idea in his mind as to where he will be best prepared to unload the "big one." Then in his competition he would take just that number of preliminary throws as a part of his regular warm-up on the day of the meet. In this way he will feel more confident of getting his maximum effort in competition and will not constantly be searching on that all-important day for the "big one." You have all experienced frustration in this regard by having your boys get the best put of the day either before or after the competition throws.

The necessity for mental readiness in the high jump has probably been apparent many, many times to all of us. Actually, the high jumper's trial is probably the quickest in track, with the shortest time in which to remedy a mistake. Recognizing this, it is good psychology to keep your boy away from the uprights when the bar nears its maximum heights. You may be wise to instruct him not to try to read the heights registered on the uprights; as is so often said, "A little knowledge is a dangerous thing." On the other hand, it is usually quite a mental boost for a boy to learn that he has cleared a height greater than he has ever achieved before. Too, it is most important to impress upon the jumper the importance of clearing the crossbar on the first attempt. Not only is this demoralizing to the competing athletes watching, but it is also encouraging to the boy who makes the first jump a good one.

These are just two field events where mental blocks can be a real concern. Each of the other field events and running events can have the same effect upon the athlete and it will need your coaching experience to avoid the pitfalls of mental blocks.

A runner's mental blocks can sometimes be overcome by making the boy concentrate upon some special phase of the race, rather than let him encompass the entire distance in his thinking. In this way you can eliminate some of his personal worries or fatigue; to point out a specific direction as to where to move and how to surprise an opponent can be helpful. Boys often become so engrossed in their plan of action that they go by the point at which they have been feeling distress and go on to fine successes.

Over and over again we are made aware of the fact that limits evidenced as physical are for the most part attributable to the psychological in nature. In other words, MENTAL READINESS unlocks the door of limitation. If runners raced only with their legs, half the worries of coaches would be eliminated. All too often, our boys are beaten mentally before they are ever beaten physically.

FOOD CONSIDERATIONS FOR CHAMPIONSHIP TRACK AND FIELD PERFORMANCE

Training diet to a track and field man is one of the most important factors that determine whether he performs up to his developed ability or falls below it. Studies have shown that the majority of athletes eat entirely too much. Upon occasion even champions have indulged in this foolishness with disastrous competitive results and the inevitable humiliation.

The proper diet for track and field atheltes is determined to a great extent by the latitude and longitude where an athlete happens to be born and where he lives. Hannes Kolehmainen of Finland won three long-distance championships in the 1912 Stockholm Olympic Games on a meatless diet, the flesh substitute being fish. Athletes born and raised in countries where meat is generally eaten have won national and international Olympic Championships on a diet in which meat occupied a most prominent place.

However, there is complete agreement on at least one point, and this is: THE ASPIRANT FOR SUCCESS IN MAJOR TRACK AND FIELD COMPETITION MUST AVOID FOOD THAT IS HARD TO DIGEST, SUCH AS FRIED FOODS AND PASTRIES, AND MUST ESPECIALLY FAVOR FOODS THAT HAVE ALKALINE QUALITIES.

Each of us, through personal experience or by association, has come to realize that each individual has his food idiosyncrasies--what may be food for one is poison for another; what one person may enjoy a great deal, another will dislike intensely. Fortunately, for the most part we are able to get a great variety of good foods that can satisfy even the most fastidious appetite.

There is no known machine in the world today as efficient or as capable as the human body. We therefore owe it to ourselves, whether we are athletes or not, to introduce the highest quality of energy-giving foods into this fantastically wonderful machine. It is not merely a cliche to say that we perform as we eat. Without proper nourishment, how can our body meet the demands of intensive athletic effort? It would be sheer folly to inject only space-filling foods with little or no nutrient value; our athlete must select the foods that produce top-level energy and stamina.

A few simple rules related to diet could be mentioned at this time before going into detail concerning the pros and cons of the best and poorest foods that one might eat. To simplify this presentation, let's take them one by one.

1. Avoid eating any foods that cause a wrestling match in your stomach. Instead, eat plain, simple foods that agree with you, and eat them at a regular time.

2. Don't ply yourself with "junk" or nutrient substitutes between meals. Eat only at mealtimes.

3. Don't try to clean up the whole table by stuffing yourself beyond your needs. In other words, don't overeat.

4. Avoid eating prior to going to bed. If you feel you will die before morning, then try eating one orange.

5. A sound foundation to supply energy and stamina can be found in a very simple, ordinary list of foods which might include the following:

   Skim milk in the amount of one quart, with one tablespoon of dry skim milk added to each glass one drinks
   Sea food
   Eggs
   Green vegetables
   Fruit
   Whole grain bread

Although we probably do not need to discuss basic food elements in a long and involved manner, it might be helpful to know where to find the things that give us high-grade performance and power in track and field athletics. These basic food elements consist of iron, calcium, phosphorus and vitamins, and are very necessary in a balanced athletic diet. Fats, another of the food elements, should be used sparingly in the diet, for they are slow in assimilating and tend to "gum up" smooth functioning of our intricate human machine.

1. Iron is very important in athletic conditioning. If this element is lacking, a boy tends toward shortness of breath and excessive beating of the heart through exercise. The boy in athletics especially needs an adequate intake of this element. The need may be met by eating adequate amounts of roast beef, beef kidneys, oysters, liver, spinach, whole wheat bread, raisins, eggs and fresh fruit.

2. Calcium is the base mineral for endurance. It is a neutralizer of the waste products caused by muscular exercise which is of course necessary for good distance performance. An individual needs approximately one gram each day. Eggs, peas, raisins, grapes, rice, and 1 quart of skim milk each day, fortified with one tablespoon of powdered milk for each glass of milk intake, give the athlete the necessary requirements.

3. Phosphorus is one of our finest minerals that resists the onset of fatigue and is also used in the process of efficient muscular contraction. A daily need of one gram of this mineral can be found in whole wheat, oatmeal, lima beans and raisins.

4. Vitamins are chemical substances which are vital in maintaining stamina, vitality, resistance and good health. Our bodies need a certain amount of each daily. These substances are found in natural foods.

VITAMINS IN DIET

Vitamin A assures us of a good healthy skin and aids the mucous membranes of the nose and throat in preventing colds. Essential too in the formation of good teeth and promotion of normal growth. Vitamin A may be identified by color; it occurs in yellow foods such as ice cream, butter, milk, carrots, sweet potatoes, yellow turnips, apricots and peaches, also in green foods such as kale, spinach, chard, broccoli and all greens.

Vitamin B and Minerals produce energy and promote growth plus muscle building and iron for our red corpuscles. We can find this in whole grain breads and cereals, liver, bacon, veal, special vitamin-enriched breads. Assures us of a good appetite, eliminates nervousness, fatigue and headache.

Vitamin B_2 (Vitamin G), commonly called "riboflavin," prevents skin eruptions, abnormal eye changes, promotes health and aids in the oxidation process of the body cells. This is found in milk, eggs, cheese, lean muscle meats, liver, kidney, heart, turnip tops, kale, chard, mustard greens and beet tops.

Vitamin C prevents scurvy, a common student ailment, protects the gums and teeth, and fights restlessness and irritability. Rich sources include citrus fruits, oranges, grapefruit, lemons, limes, tomatoes and vegetable greens.

Vitamin D, often referred to as the "sunshine vitamin," aids in the absorption of calcium and phosphorus. This may be obtained through sunshine in the summer and by taking vitamin D capsules and the sun lamp in the winter. It is recommended that, on the short days of the fall and winter months, a "Vita-Cap," which is available on the market be taken after each workout.

Once more let's be sure that we keep at a minimum the fats and greasy foods, which would include gravies, pastries, etc., in our diet. IT TAKES 11% MORE DIGESTIVE ENERGY TO DIGEST A DIET OF FATS THAN A DIET OF CARBOHYDRATES. Too much fat increases the acidity of the blood and consequently lowers endurance.

Diet, like all other aspects of athletics, involves the psychological as well as the physical. The attitude one develops, the understanding that one has, and the desire to take a positive approach toward the building of a healthy, well-nourished body are all-important if we expect maximum physical results in our track and field endeavors. It is therefore important that we as coaches present the subject of eating so the psychological as well as the physiological aspects are included. In this way the athlete gains confidence that he is doing the right thing, that he is ready for all-out training and competitive effort. If an athlete eats, rests, and lives a reasonable and balanced life he will eliminate a great deal of his personal doubts concerning his preparedness to meet an opponent.

In all of this, quality is much more important than quantity. Actually, excessive intake of food can produce "auto-intoxication," which is just as harmful as excessive dissipation in any other form.

HIGH-PROTEIN DIET

Recently we have come to realize that high-protein, energy-producing diets are intensely important for our athletes. Meat, milk, eggs, fish, cheese and other foods of animal origin are especially indicated, for they lend the highest quality and quantity of proteins. Too, they supply other valuable elements essential for the utilization of these foods by our bodies. These proteins play a most important part in building cells and repairing tissue caused as a result of exercise. Too, the diet should be high in carbohydrates, low in fat, and rich in alkaline and mineral foods, as mentioned previously. Just as in your family car, the gas (food) mixture must be rich or lean, high-test or low-test, according to the job to be performed. Certainly it is preferable that our athletes be lean; this is one of the reasons that we have them enter their contests on a very light meal. The last meal is of little consequence; the real energy comes from the burning of their own lean meat. A fat man draws his energy from his own body fat, a slow-burning fuel which "slows him up."

It is no secret that health and efficient performance lie in keeping the supply of assimilated food EQUAL to the demand. Good circulation then nourishes all the tissues and aids in eliminating the waste. Correct breathing habits supply the OXYGEN that puts the waste in condition for elimination.

Regulation of the functions of the body is of prime importance. Elimination of waste is of greatest importance. The best time to heed this urge is immediately after breakfast. Food should have sufficient bulk to fill this tract, and food bulk should be spongy enough to move freely and easily.

Energy food for activities, namely carbohydrates, should be used in abundance in our diet. They are necessary quick-energy foods and if not supplied in adequate amounts, you rob your body of protein for energy, when it should be available for tissue building and repair made necessary by your training and activities. Fats, for somewhat the same reason, should be in the form of butter and vegetable oils (for example, soy bean oil). The carbohydrates are starches and sugars and are the easiest of all the foods to digest. They might be the fuel choice where SPEED IS DESIRED. They furnish rapidly absorbed, rapidly produced energy, burned in the body like a quick, hot fire, and can be likened to a high-test gasoline. Your best sources of these, of course, are fruits, vegetables, cereals, bread, jams, jellies, and plain hard candies. Fat, although high in food value, is digested and absorbed MORE SLOWLY. It may be compared to very low-test gasoline and is the type of food to be avoided where speed is desired. Its chief sources are rich milk, cream, butter, ice cream, cheese, fat meat, gravies, bacon, nuts, egg yolks, and olive and other vegetable oils.

"Wind" is a factor in training diet, and the diet must contain soda-like compounds which are found most abundantly in all fruits and vegetables and are concerned with the elimination of carbonic acid (exhaust) from the body. The highly alkaline bean has a preferred place in the training menu for its heavy content of soda-like compounds. Lemonade, orange juice, or any type of fruit juice, well sweetened with malt sugar or honey, makes a fine drink to aid in the elimination of the toxic carbonic acid gas from the lungs and thus preserve the athlete's wind.

WHEN TO EAT AS A FACTOR IN GOOD ATHLETIC PERFORMANCE

It is generally agreed among the track and field coaching fraternity that what we eat immediately before the competition time (usually anywhere from three and one-half to four and one-half hours prior to the meet) merely serves to relieve the hunger pangs and put the athlete in a confident psychological state of mind. A simple diet of a glass of orange juice, a medium slice of roast beef, buttered toast with honey, a psychological spoonful of peas, hot tea and a dish of pears would suffice adequately to carry the athlete through an afternoon of competition in good shape. Above all, an athlete should not be allowed to sit down as if it were his last meal and gorge himself prior to the contest. Actually, only the scrub will do this, while the champions and veterans are too nervous to eat.

It has been observed that if there is a monotony or superabundance of any one type of food at the expense of another, the athlete seems to be subject to colds and abdominal indigestion and poor elimination.

Perhaps it might be helpful if we cover in a general way the amount of time it takes (in hours) the various foods to leave the stomach. They are as follows:

Meat, $2\frac{1}{2}$ to $3\frac{1}{2}$ hours. Beef is best for pre-contest consumption; it does not make any difference whether it is rare, medium or well done. It remains in the exact same time of $2\frac{1}{2}$ hours. Pork leaves after a much longer period of time. Liver hangs for six hours. Ham stays with you for eight hours. Sweetbreads and weiners will outstay ham. Eggs leave faster than meat cooked any way. Scrambled eggs linger longer than poached, shirred, fried or in omelet. A word of warning, however, concerning eggs. They are hard to digest if one has a sensitive stomach for they contain a sulphur base which causes gas to form with resultant illness, especially in boys having nervous stomachs.

Vegetables, 2 to $2\frac{1}{2}$ hours. Peas, carrots, corn, beans remain about the same time. Parsnips, cabbage, turnips take longer. It doesn't matter whether potatoes are boiled, whipped, or mashed; it takes the same length of time.

Pastry. Puddings, light cakes, ice cream, pies empty in $2\frac{1}{2}$-plus hours. Strange as it seems, custard remains for a longer period of time.

Breads. Soft and new breads, rolls, etc., stay in the stomach for a long time. Whole wheat toast remains only a short time.

Drinks. Coffee and tea have no effect on emptying time. Tea (in long duration) is a diuretic, it increases blood pressure, augments muscular energy, diminishes fatigue sense. Coffee is a short-duration stimulant, is stronger than tea and is sometimes called a "heart whip." If athletes like coffee and tea, are used to them and use in moderation, they are O.K. Fruit juices are always good, especially citrus.

A word of warning might be appropriate in respect to drinking. Never drink great amounts of water immediately after or just prior to practice. Only wash out your mouth immediately after a hard workout. Wait until after the shower to take a good drink. Taking on cold water when hot causes cramps. Water at mealtime should not be used to wash down unmasticated particles of food in the mouth. This harms the normal important digestive processes in the mouth.

Milk should be consumed slowly and, interestingly, boiled milk is easier to digest. It is wise to cut down on the amount of milk on the day of the meet. It is preferable that a person drink skim milk, augmenting it with powdered milk, one tablespoon for each glass of milk you drink. Iced milk or iced water slows up and disturbs digestion. It is advocated that water loss and intake be pretty well balanced. In general, don't dry out too much; at the same time, don't flood the body with liquids.

If there were one most important meal, it is indicated by our health authorities that that meal would be breakfast. A heavy breakfast is much preferred over a heavy evening meal. Actually it would be a wise procedure to reverse the order of our normal eating procedures, have steaks for breakfast and cereals for supper.

A DAILY DIET ROUTINE

BREAKFAST - Consisting of 8 ounces orange, grapefruit or tomato juice; fresh fruits such as peaches, pears, melons, etc. It is recommended that if possible two fruits be included, one being citrus. Whole grain cereal, preferably hot; wheat or soy or rye bread; skim milk, one glass, with an added tablespoon of powdered milk. Two eggs, boiled, scrambled or poached. If cooked in a pan use a vegetable oil such as soy bean, for example. Potatoes if desired, may be boiled, baked or scalloped. Again a word of warning concerning eggs. It is suggested that they not be eaten prior to competition; especially they should be avoided by those boys who have a history of upset stomachs or nervous stomachs.

LUNCH - We prefer a light lunch consisting of soup--tomato, vegetable, split pea, etc.--with salad, mashed or baked potatoes, whole wheat bread, glass of skim milk with a tablespoon of powdered milk added, green or yellow vegetable may be supplemented by cheese of some sort--cottage, American, Swiss, etc.--and finally fruit for dessert--oranges, pears, peaches, cantaloupe, etc. The reason behind the light lunch is that we find when the stomach contains food, the athlete is apt to suffer from nausea and vomiting upon strenuous exercise or strong emotional feelings involved by the hard practice.

DINNER - Chief item in this meal should be roast beef, veal steak, beef kidney or liver. Pork is to be eliminated if any other type of meat is available. Potatoes may be cooked in any manner except fried. Whole grain bread is recommended with butter. Vegetables should be two or three in number, green and yellow--beans, peas, carrots, etc. One or two glasses of skim milk with a tablespoon of powdered milk added to each glass. Fruit salad or green salad with vegetable oil dressing. Dessert may be custard, sliced fruit--peaches, pineapple, pears, etc.

Along with this daily diet it might be well to indicate that there are many instances in which an athlete needs to augment his salt intake, especially if he is a profuse "sweater," causing the body to lose considerable amounts of salt, thus interfering with the body chemical balance. Such a body imbalance could cause a boy to suffer cramps in the muscles and in the stomach. It is a wise insurance to have your boys take a salt tablet after workouts to restore this balance once again. Avoid too heavy a concentration in the stomach; adequate amounts of water should be taken at the time of the salt tablet.

Let's urge that our athletes give this subject of diet real thought. Help them know themselves, for this knowledge by each individual will pay dividends in performance for one and all.